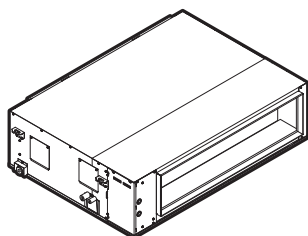




Installation manual



VRV IV heat exchanger unit for indoor installation



RDXYQ5T8V1B
RDXYQ8T7V1B

Installation manual
VRV IV heat exchanger unit for indoor installation

English

Table of Contents

1	About the documentation	2
1.1	About this document.....	2
2	About the box	2
2.1	Heat exchanger unit	2
2.1.1	To remove the accessories from the heat exchanger unit	2
2.1.2	To remove the transportation sheet	2
3	About the units and options	3
3.1	About the compressor unit and heat exchanger unit.....	3
3.2	System layout	3
3.3	Combining units and options	3
3.3.1	Possible options for the compressor unit and heat exchanger unit	3
4	Preparation	3
4.1	Preparing the installation site	3
4.1.1	Installation site requirements of the heat exchanger unit	3
4.2	Preparing electrical wiring	4
4.2.1	Safety device requirements	4
5	Installation	4
5.1	Opening the units	4
5.1.1	To open the switch box cover of the heat exchanger unit	4
5.2	Mounting the heat exchanger unit	4
5.2.1	Guidelines when installing the heat exchanger unit....	4
5.2.2	Guidelines when installing the ducting.....	4
5.2.3	Guidelines when installing the drain piping.....	5
5.3	Connecting the refrigerant piping	6
5.3.1	To connect the refrigerant piping to the heat exchanger unit	6
5.4	Connecting the electrical wiring.....	6
5.4.1	Safety device requirements	6
5.4.2	Field wiring: Overview.....	7
5.4.3	Guidelines when connecting the electrical wiring	7
5.4.4	To connect the electrical wiring on the heat exchanger unit	7
6	Technical data	8
6.1	Wiring diagram: Heat exchanger unit	8

1 About the documentation

1.1 About this document

Target audience

Authorised installers

Authorised installers + end users



INFORMATION

This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.

Documentation set

This document is part of a documentation set. The complete set consists of:

- **General safety precautions:**
 - Safety instructions that you must read before installing
 - Format: Paper (in the accessory bag of the compressor unit)

- **Compressor unit installation and operation manual:**
 - Installation and operation instructions
 - Format: Paper (in the accessory bag of the compressor unit)
- **Heat exchanger unit installation manual:**
 - Installation instructions
 - Format: Paper (in the accessory bag of the heat exchanger unit)
- **Installer and user reference guide:**
 - Preparation of the installation, reference data,...
 - Detailed step-by-step instructions and background information for basic and advanced usage
 - Format: Digital files on <https://www.daikin.eu>. Use the search function 🔍 to find your model.

The latest revision of the supplied documentation is published on the regional Daikin website and is available via your dealer.

The original instructions are written in English. All other languages are translations of the original instructions.

Technical engineering data

- A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible).
- The **full set** of the latest technical data is available on the Daikin Business Portal (authentication required).

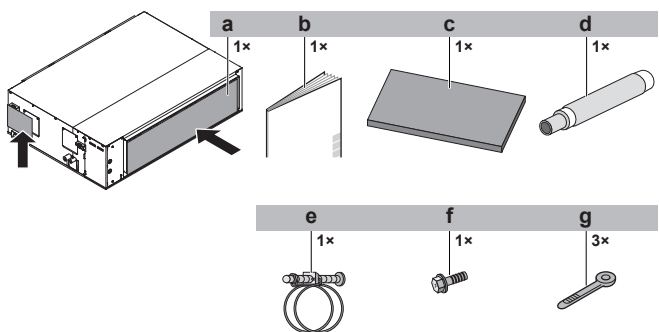
2 About the box

Keep the following in mind:

- At delivery, the unit **MUST** be checked for damage and completeness. Any damage or missing parts **MUST** be reported immediately to the claims agent of the carrier.
- Bring the packed unit as close as possible to its final installation position to prevent damage during transport.
- Prepare in advance the path along which you want to bring the unit to its final installation position.

2.1 Heat exchanger unit

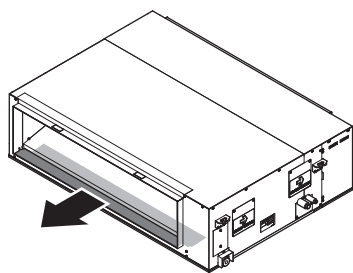
2.1.1 To remove the accessories from the heat exchanger unit



- a Optional filter for debris
- b Heat exchanger unit installation manual
- c Sealing pad
- d Drain hose
- e Metal clamp
- f Screw (for shield of interconnection wiring) (see "5.4.4 To connect the electrical wiring on the heat exchanger unit" ▶ 7)
- g Cable tie

2.1.2 To remove the transportation sheet

- 1 Remove the sheet. The sheet protects the unit during transport.



3 About the units and options

3.1 About the compressor unit and heat exchanger unit

The compressor unit and heat exchanger unit are intended for indoor installation and aimed for air to air heat pump applications.

Specification		5 HP	8 HP
Maximum capacity	Heating	16.0 kW	25.0 kW
	Cooling	14.0 kW	22.4 kW
Outside ambient design temperature	Heating	-20~15.5°C WB	
	Cooling	-5~46°C DB	
Ambient design temperature of compressor unit and heat exchanger unit		5~35°C DB	
Maximum relative humidity around the compressor unit and heat exchanger unit	Heating	50% ^(a)	
	Cooling	80% ^(a)	

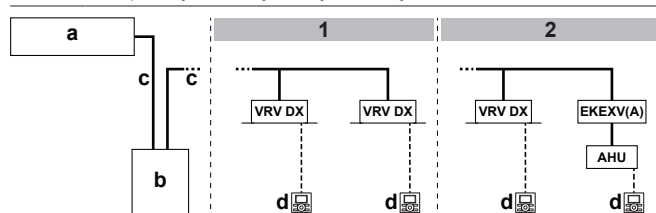
(a) To avoid condensation and water dripping out of the unit. If the temperature or the humidity is beyond these conditions, safety devices may be put in action and the air conditioner may not operate.

3.2 System layout



INFORMATION

The following figure is an example and may NOT completely match your system layout.



- 1 In case of VRV DX indoor units
- 2 In case of VRV DX indoor units combined with an air handling unit

a Heat exchanger unit

b Compressor unit

c Refrigerant piping

d User interface (dedicated depending on indoor unit type)

VRV DX VRV direct expansion (DX) indoor unit

EKE XV(A) Expansion valve kit

AHU Air handling unit

3.3 Combining units and options



INFORMATION

Certain options may NOT be available in your country.

3.3.1 Possible options for the compressor unit and heat exchanger unit

For more possible options, see the installer and user reference guide.

Drain pan heater (EKDPH1RDX)

- **When.** Installation is optional. It is recommended in areas where the outside temperature is below -7°C for more than 24 hours continuously.
- **Where.** Install the drain pan heater in the heat exchanger unit.
- **How.** See the installation instructions delivered with the drain pan heater.

Filter for debris (delivered as accessory)

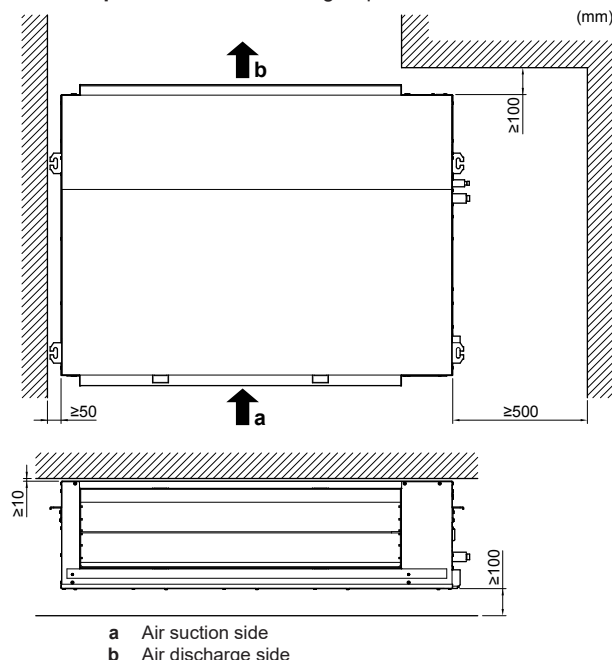
- **When.** Installation is optional. It is recommended in places where a lot of debris or dirt (example: leaves) can go into the suction ducting.
- **Where.** Install the filter in one of the following places:
 - Suction opening of the heat exchanger unit
 - Suction ducting (easier for maintenance)
- **How.** See the installation instructions attached to the filter.
- **Pressure drop over the filter:**
 - 5 HP: 30 Pa at 60 m³/min
 - 8 HP: 75 Pa at 100 m³/min

4 Preparation

4.1 Preparing the installation site

4.1.1 Installation site requirements of the heat exchanger unit

- **Service space.** Mind the following requirements:



- a Air suction side
b Air discharge side



CAUTION

Appliance NOT accessible to the general public, install it in a secured area, protected from easy access.

These units (compressor unit, heat exchanger unit and indoor units) are suitable for installation in a commercial and light industrial environment.

5 Installation



NOTICE

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

4.2 Preparing electrical wiring

4.2.1 Safety device requirements

In the power supply line, ALWAYS install a residual current device (RCD) with an instantaneous action. The installed RCD MUST comply with the national wiring regulation.

Power supply: Heat exchanger unit

The power supply must be protected with the required safety devices, i.e. a main switch, a slow blow fuse on each phase and an earth leakage protector in accordance with the applicable legislation.

Selection and sizing of the wiring should be done in accordance with the applicable legislation based on the information mentioned in the table below.

Model	Minimum circuit am- pacity	Recommended fuses
RDXYQ5	4.6 A	10 A
RDXYQ8	7.0 A	10 A

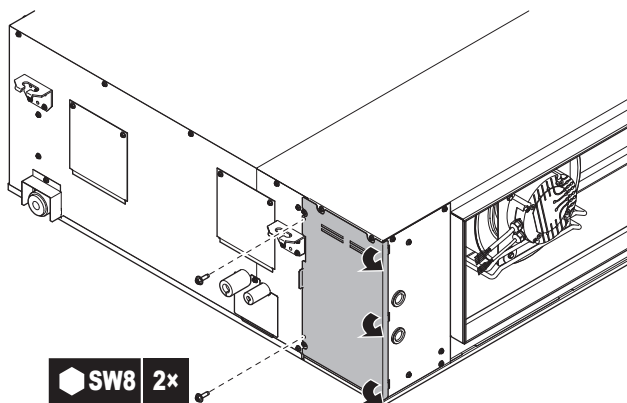
- Phase and frequency: 1~ 50 Hz
- Voltage: 220-240 V

Interconnection wiring

Interconnection line section:

Interconnection wiring	Sheathed + shielded cable (2 wires) Vinyl cords 0.75~1.25 mm ² (using shielded cable for the interconnection wiring is mandatory for 5 HP, and optional for 8 HP)
Maximum wiring length (= distance between compressor unit and furthest indoor unit)	300 m
Total wiring length (= distance between compressor unit and all indoor units, and between compressor unit and heat exchanger unit)	600 m

If the total interconnection wiring exceeds these limits, it may result in communication error.



5.2 Mounting the heat exchanger unit

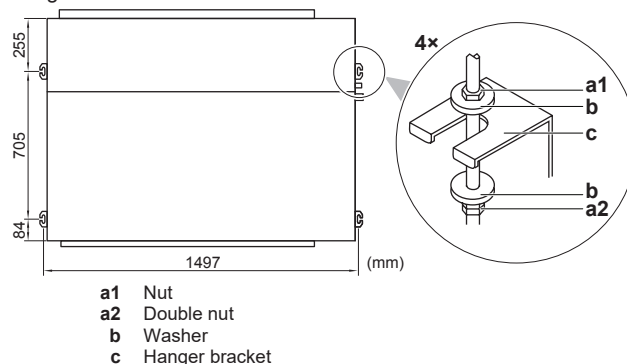
5.2.1 Guidelines when installing the heat exchanger unit



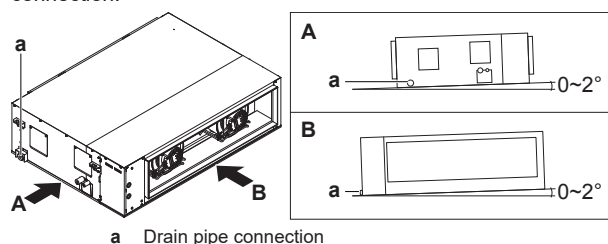
INFORMATION

Optional equipment. When installing optional equipment, also read the installation manual of the optional equipment. Depending on the field conditions, it might be easier to install the optional equipment first.

- Suspension bolts.** Use suspension bolts for installation. Check whether the ceiling is strong enough to support the weight of the unit. If there is a risk, reinforce the ceiling before installing the unit. Attach the hanger bracket to the suspension bolt. Fix it securely by using a nut and washer from the upper and lower sides of the hanger bracket.



- Drain water flow.** Make sure drain water flows to the drain pipe connection.

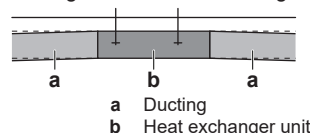


a Drain pipe connection

5.2.2 Guidelines when installing the ducting

The ducting is to be field supplied.

- Slope.** Make sure the ducting slopes down to prevent water from flowing into the heat exchanger unit.



a Ducting
b Heat exchanger unit

5 Installation

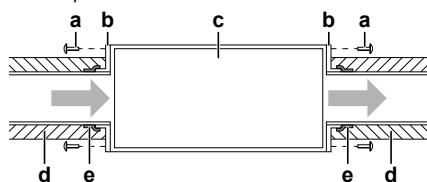
5.1 Opening the units

5.1.1 To open the switch box cover of the heat exchanger unit



DANGER: RISK OF ELECTROCUTION

- **Grills.** Install grills in the suction ducting entrance and the discharge ducting exit to prevent animals and debris from going into the ducting.
- **Service holes.** Put service holes in the ducting to make maintenance easier.
- **Thermal insulation.** Insulate the ducting against thermal losses to prevent sweat (during heating operation), and to prevent overheating of the building (during cooling operation).
- **Sound insulation.** Insulate the ducting against noise, especially in sound-sensitive areas. **Example:** Sound-absorbing ducting; sound-absorbing baffle in the ducting.
- **Air leaks.** Wind aluminium tape around the connection between the heat exchanger unit and the ducting. Make sure there are no air leaks between the ducting and the heat exchanger unit, and at any other connection. This to prevent sweat, overheating and sound problems.

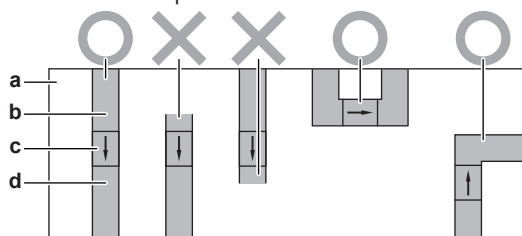


- a Screw (field supply)
- b Flange (field supply)
- c Heat exchanger unit
- d Insulation (field supply)
- e Aluminium tape (field supply)

- **Airflow:**
 - Protect the ducting against reverse airflow from wind.
 - Prevent discharged air from flowing back to the suction side.

Possible consequence: Decreased performance of the unit.

- **Outside air.** Connect the suction ducting and discharge ducting with the outside air. If the suction ducting or discharge ducting is connected with the inside air, it might be impossible to reach the desired room temperature.



- O Allowed
- X Not allowed
- a Building (top view)
- b Suction ducting
- c Heat exchanger unit
- d Discharge ducting

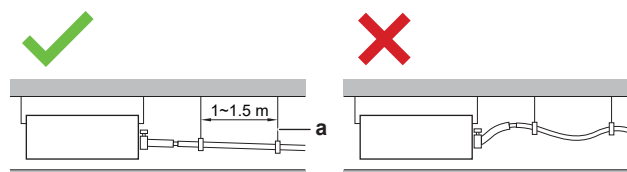
5.2.3 Guidelines when installing the drain piping

Make sure condensation water can be evacuated properly. This involves:

- General guidelines
- Connecting the drain piping to the heat exchanger unit
- Installing a drain pump and drain reservoir
- Checking for water leaks

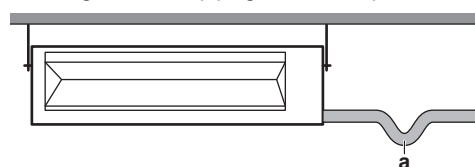
General guidelines

- **Pipe length.** Keep drain piping as short as possible.
- **Pipe size.** Keep the pipe size equal to or greater than that of the connecting pipe (vinyl pipe of 25 mm nominal diameter and 32 mm outer diameter).
- **Slope.** Make sure the drain piping slopes down (at least 1/100) to prevent air from being trapped in the piping. Use hanging bars as shown.



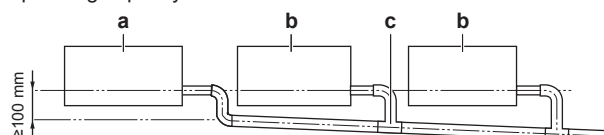
- a Hanging bar
- ✓ Allowed
- ✗ Not allowed

- **Condensation.** Take measures against condensation. Insulate the complete drain piping in the building.
- **Bad odours.** To prevent bad odours and air going into the unit through the drain piping, install a trap.



- a Trap

- **Combining drain pipes.** You can combine drain pipes. Make sure to use drain pipes and T-joints with a correct gauge for the operating capacity of the units.



- a Heat exchanger unit
- b Indoor unit
- c T-joint

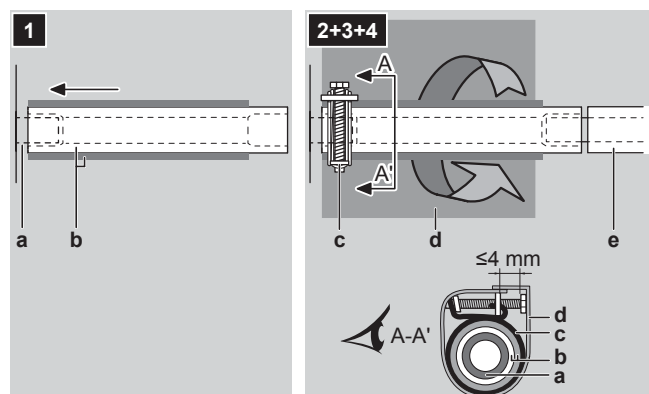
To connect the drain piping to the heat exchanger unit



NOTICE

Incorrect connection of the drain hose might cause leaks, and damage the installation space and surroundings.

- 1 Push the drain hose as far as possible over the drain pipe connection.
- 2 Tighten the metal clamp until the screw head is less than 4 mm from the metal clamp part.
- 3 Wind the sealing pad (= insulation) around the metal clamp and drain hose, and fix it with cable ties.
- 4 Connect the drain piping to the drain hose.



- a Drain pipe connection (attached to the unit)
- b Drain hose (accessory)
- c Metal clamp (accessory)
- d Sealing pad (accessory)
- e Drain piping (field supply)

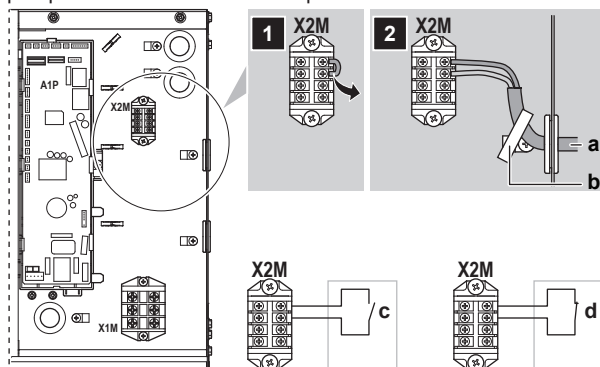
5 Installation

Guidelines when installing a drain pump and drain reservoir

If you install a drain pump, you must also install a drain reservoir. The drain pump and drain reservoir are to be field supplied.

• Drain pump:

- **Minimum flow rate:** 45 l/h
- **Feedback contact.** You can connect a contact that gives the status of the drain pump to the heat exchanger unit. The heat pump uses this contact as an input.



- a Feedback contact from the drain pump
- b Cable tie
- c Drain pump malfunction: If the contact opens, the heat pump stops operating and gives an error.
- d Drain pump normal operation: If the contact closes, the heat pump resumes normal operation.

• Drain reservoir:

- **Minimum volume:** 3 l
- **Best practice:** Use a drain reservoir with a float switch that gives an ON/OFF signal to the drain pump.

To check for water leaks

Gradually put approximately 1 l of water in the drain pan, and check for water leaks.

5.3 Connecting the refrigerant piping



DANGER: RISK OF BURNING/SCALDING

5.3.1 To connect the refrigerant piping to the heat exchanger unit

- 1 Remove the cover.
- 2 Remove the 2 insulation pieces.
- 3 Put a wet cloth in front of the EPS to protect the drain pan.
- 4 Braze the liquid and gas piping.



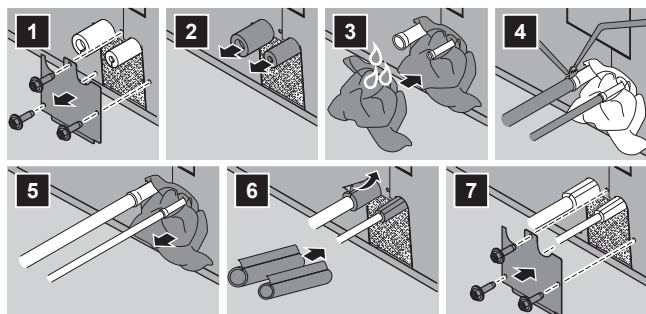
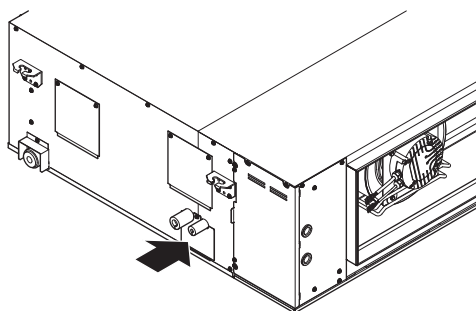
NOTICE

Only for 8 HP.

Piping adapter (Ø19.1→22.2 mm) (delivered as accessory in the compressor unit). Use the piping adapter to connect the field piping (Ø22.2 mm) to the gas piping connection of the heat exchanger unit (Ø19.1 mm).



- 5 Remove the wet cloth.
- 6 Put back the 2 insulation pieces, peel off the insulation tapes and adhere them to the insulation pieces.
- 7 Reattach the cover.



5.4 Connecting the electrical wiring

5.4.1 Safety device requirements

In the power supply line, ALWAYS install a residual current device (RCD) with an instantaneous action. The installed RCD MUST comply with the national wiring regulation.

Power supply: Heat exchanger unit

The power supply must be protected with the required safety devices, i.e. a main switch, a slow blow fuse on each phase and an earth leakage protector in accordance with the applicable legislation.

Selection and sizing of the wiring should be done in accordance with the applicable legislation based on the information mentioned in the table below.

Model	Minimum circuit am- capacity	Recommended fuses
RDXYQ5	4.6 A	10 A
RDXYQ8	7.0 A	10 A

- Phase and frequency: 1~ 50 Hz
- Voltage: 220-240 V

Interconnection wiring

Interconnection line section:

Interconnection wiring	Sheathed + shielded cable (2 wires) Vinyl cords 0.75~1.25 mm ² (using shielded cable for the interconnection wiring is mandatory for 5 HP, and optional for 8 HP)
Maximum wiring length (= distance between compressor unit and furthest indoor unit)	300 m
Total wiring length (= distance between compressor unit and all indoor units, and between compressor unit and heat exchanger unit)	600 m

If the total interconnection wiring exceeds these limits, it may result in communication error.

5.4.2 Field wiring: Overview

Field wiring consists of:

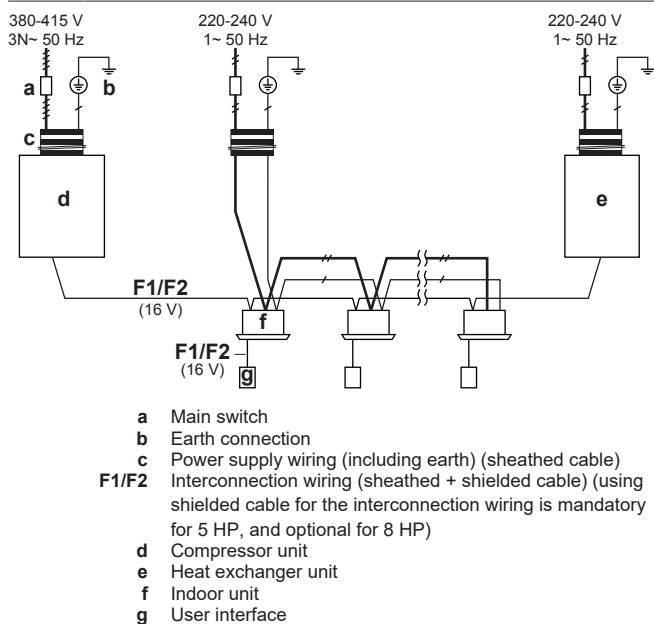
- Power supply (always including earth)
- Communication (= interconnection) wiring between the compressor unit, the heat exchanger unit, and the indoor units.

Example:



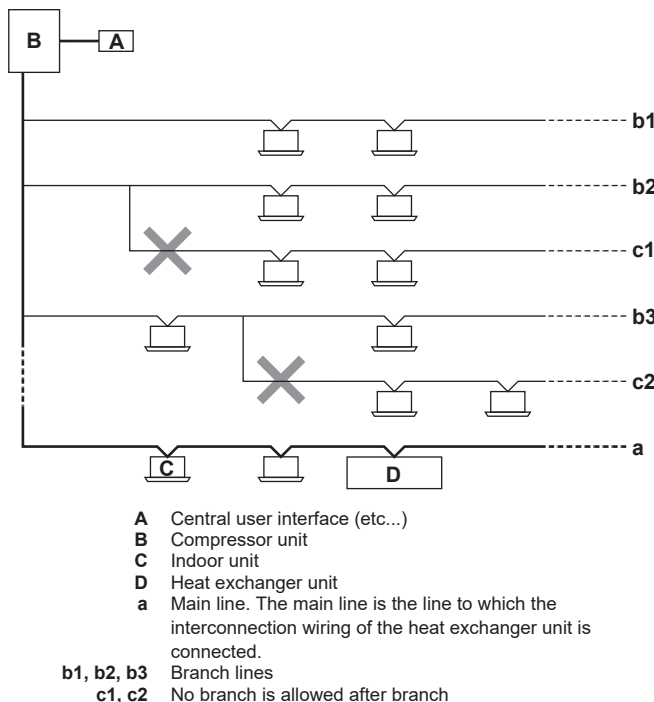
INFORMATION

The following figures are examples and may NOT completely match your system layout.



Branches

No branching is allowed after branching.



5.4.3 Guidelines when connecting the electrical wiring

Tightening torques

Wiring	Screw size	Tightening torque (N·m)
Power supply wiring (power supply + shielded ground)	M5	2.0~3.0
Transmission wiring	M3.5	0.8~0.97

5.4.4 To connect the electrical wiring on the heat exchanger unit



WARNING

Do NOT extend the power supply or the interconnection cable by using wire connectors, wire connection clamps, taped wires, extension cords.

These can cause overheating, electric shock or fire.

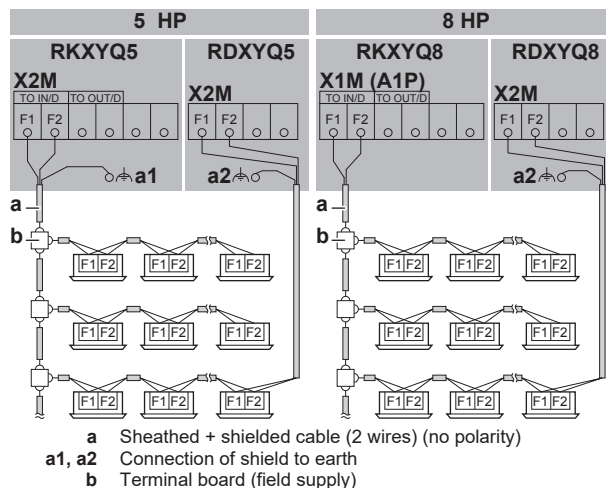


NOTICE

- Follow the wiring diagram (delivered with the unit, located at the inside of the service cover).
- Make sure the electrical wiring does NOT obstruct proper reattachment of the service cover.

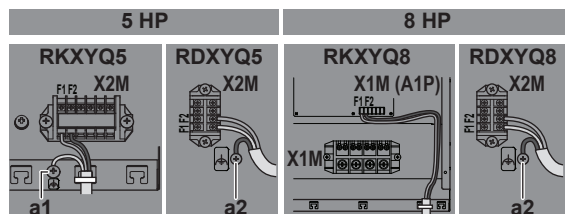
1 Remove the service cover.

2 Connect the interconnection wiring as follows:



NOTICE

Shielded cable. Using shielded cable for the interconnection wiring is mandatory for 5 HP, and optional for 8 HP.



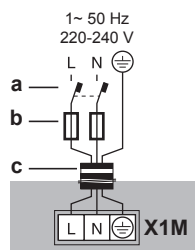
a1, a2 Earth (use the screw delivered as accessory)

When using shielded cable:

- In case of 5 HP (a1 and a2): Connect the shield to the earth of the compressor unit and the heat exchanger unit.
- In case of 8 HP (only a2): Connect the shield only to the earth of the heat exchanger unit.

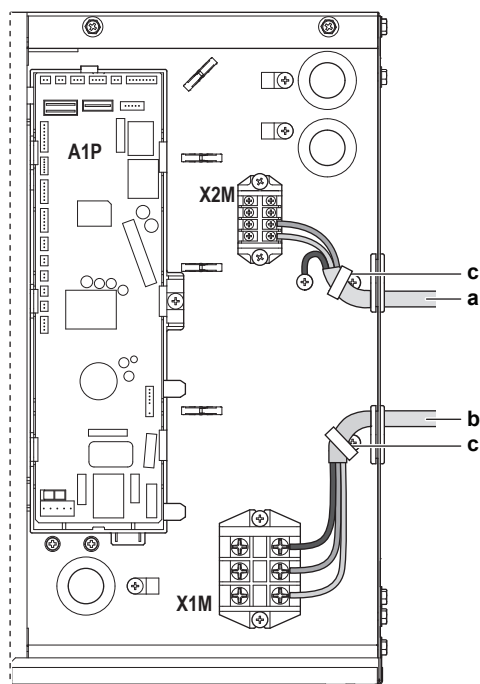
3 Connect the power supply as follows:

6 Technical data



- a Earth leakage circuit breaker
- b Fuse
- c Power supply cable

- 4 Route the wiring through the frame, and fix the cables (power supply and interconnection wiring) with cable ties.



- a Transmission wiring
- b Power supply
- c Cable tie

- Not mounted in switch box
- Wiring depending on model
- PCB

Legend for wiring diagram 5+8 HP:

- A1P Printed circuit board (main)
- A2P Printed circuit board (adapter)
- C1 Capacitor (A1P)
- E1H Drain pan heater (optional)
- F1U Fuse (F 1 A / 250 V) (optional)
- F1U Fuse (T 6.3 A / 250 V for PCB) (A1P)
- HAP Running LED (service monitor green) (A1P)
- K1a Auxiliary relay (optional)
- M*F Motor (fan)
- Q1DI Earth leakage circuit breaker (field supply)
- PS Switching power supply (A1P)
- R1T Thermistor (air)
- R2T Thermistor (gas)
- R3T Thermistor (coil)
- V1R Diode module (A1P)
- X1M Terminal strip (power supply)
- X2M Terminal strip (interconnection wiring)
- X*Y Connector
- Y1E Electronic expansion valve
- Z1C Noise filter (ferrite core)
- Z1F Noise filter (A1P)

6 Technical data

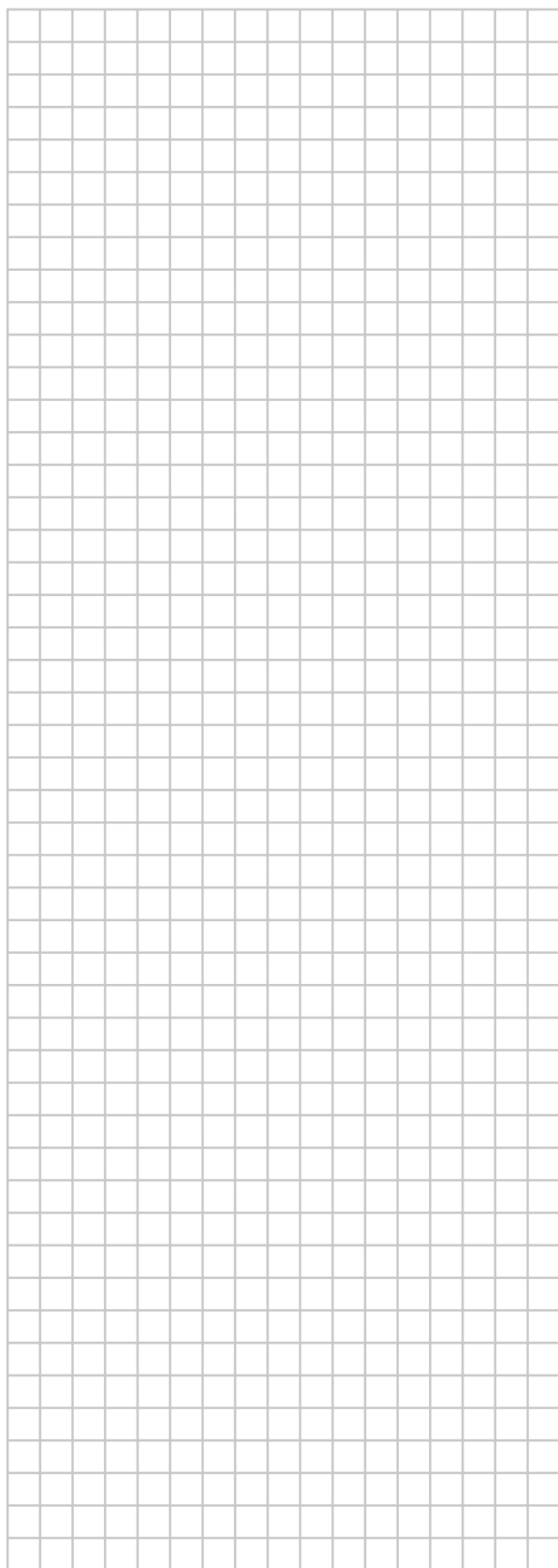
- A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible).
- The **full set** of the latest technical data is available on the Daikin Business Portal (authentication required).

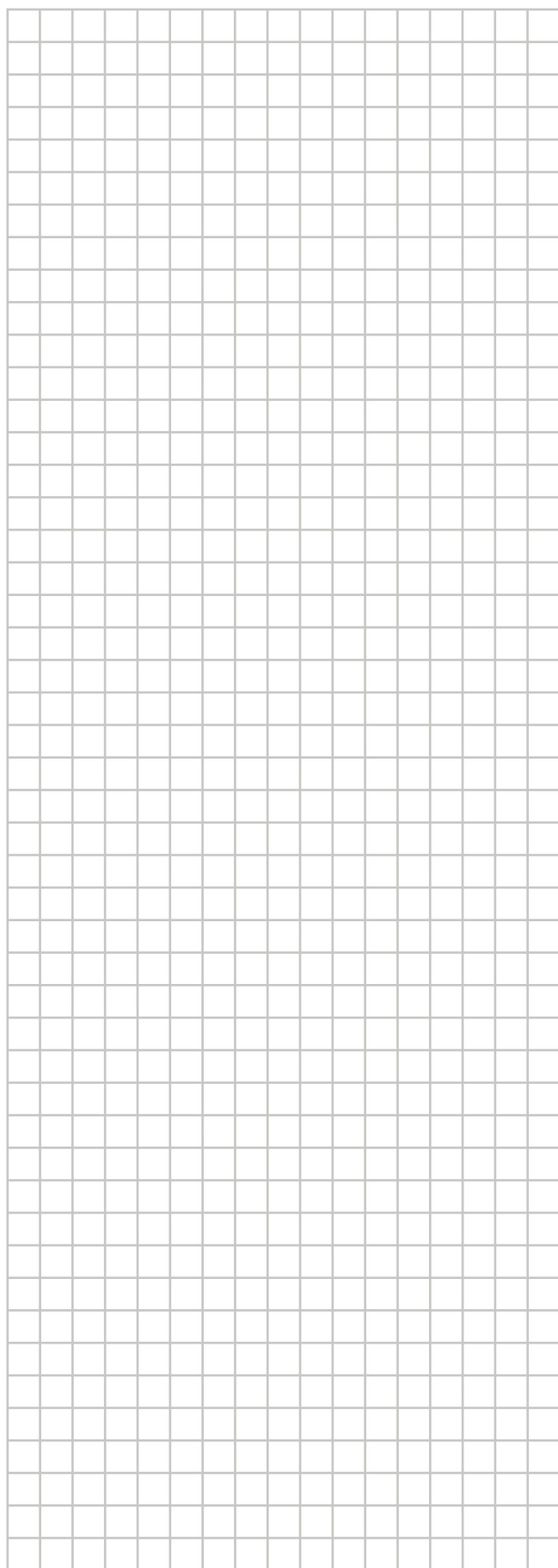
6.1 Wiring diagram: Heat exchanger unit

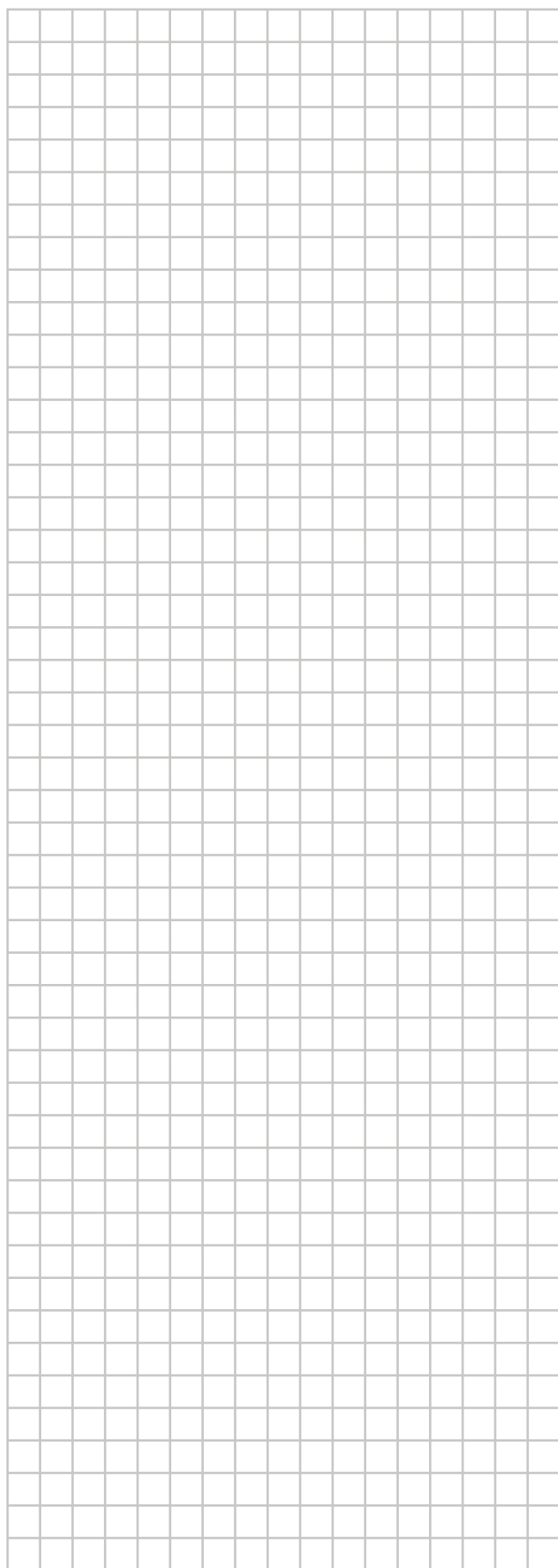
The wiring diagram is delivered with the unit, located at the inside of the switch box covers.

Symbols:

- X1M Main terminal
- Earth wiring
- 15 Wire number 15
- Field wire
- Field cable
- **/12.2 Connection ** continues on page 12 column 2
- ① Several wiring possibilities
- Option







ERC



4P499899-1 B 0000000J

Copyright 2017 Daikin

DAIKIN EUROPE N.V.

Zandvoordestraat 300, B-8400 Oostende, Belgium

4P499899-1B 2025.11